

FIGURE 1B

1201 CATCCTGTGT ATATCGTGC A GGATGGCCC CCCAGAGCC CTCCAAACAT CTAACACACA TCGATTTCTG TGTTGGAGTG GCCCATATTG CATACTACAC  
 GTAGGACACA TATAGCACGT CCTAACCGGG GGGGTCCTGG GAGGTTCGTA GATGATGTGT AGCTAAAGAC ACAACCTCAC CGGGTATAAC GTATGCTATG  
 320 HisProValT YrileValG1 naspGlyPro ProGlnSerP roProAsnI1 eTyrrTyrrh SerIleSerV alLeuGluI1 pProleLeu HisThrIleGln

1301 AACTGTTTT CATGGATCC AAGTGCTCCC GTGTCACTAC ATTCTTATT CCUTGCAAG TTATTACGAC ATCGACTTGC CGGATGACTT CATTAGCTT  
 TGTACAAAAA GTACGCTAGG TTACGGGG CACAGTGATG TAAGAATAAA GGACACGTT AATAATGCTG TAGCTGAACG GCCTACTGAA  
 354 LeuPhePhe eMetArgSer LysCysSerA rgValThrThr rPheLeuPhe ProValGlnV alIleThrThr rSerThrCys ArgMetThrS erPheSerPhe

1401 TACCAACCTG AACCCATCCA TGCAGGCCTG CAGAGCACAG ATGGGAAAT TCGAATTCAG ATGGTGTCTG ATGGGTCTGGG GGATCTCTGGG TAGGGCTCTG  
 ATGGTGGGAC TTGGTAGGT ACGTCCGGAC GTCTCGTGT TACCCCTTA AGGCTTAGT TACCCCTGT CCTAGGACCC ATGCCGAGAC

387 ThrThrLeu AsnProSerM etGlnAlaCys sArgAlaGln MetGlyGluP heArgIleR gTrpCysPhe TrpGlyAspA rgIleLeuG1 yThrAlaLeu

391 TTGGTGTGT TGCTTATTCT TCTTCCTGGG AGGGCTGAATA TGCATCAGAC GACACTGCTC CGGCAACGGG CAGTGTGGA GGCCAGCATG  
 AACACGAAAC ACCATAAGA AGAAGAACCC TCCGACTTACGCTG ACGTAGTCTG CTGTGACGAG GCGGTGCCCC GGTCAACACT CGGCCTTCGG CCGGTCTG  
 420 PheValLeu alLeuIlele uLeuLeugly ArgLeuAsnM ethisGlnTh rThrLeuLeu ArgGlnArgA laSerValG1 uAlaGluAla GlyGlnHisGly

1601 GTCCCCCTGTG ATAGGATTGA AAGAGCTACT GAGAATAGGG GGCTTCTCAA TGAGAGAGGG GAGGCTGGCTG TTATCATGGG AACCAAGGCAG ATCAATCATC  
 CAGGGGACAC TATCCTAACT TTCTCGATGA CTCTTATCCC CCGAAGAGTT ACTCTCTCGC CTCCGACGAC ATAGTACCC TTGGTCGTC TAGTTAGTAG

454 ProLeu (SEQ ID No: 2)

1701 CCTGGCAGGT CAGGGAGGA GTTACTTAGC TTCTCCTTCA CCTCTCTCCC ACAGAATTAA TTATAGGCTT GTAGGCAAGTT ATCAGATTCG  
 GACCCGTCCA GTCCGGTCCA CAATGAATCG AAGGAGAAGT GGAAGAAGGG TGCTTAAAT AATATCGAA CAAGGTTCAA CATCACACAC TAGTCTAAAGC

1801 TGCTGCCTGTG CAGCTCTGTG CTACCTGGCA GTTCCCCCTCA TGGAAATTGCA TATCAAGCTT ATCGATAACCG TCGACCT (SEQ ID No: 1)
 ACGACGGACAC GTCGAGACAC GATGGACCGT CAAGGGAGT ACCTTAAGCT ATAGTTCGAA TAGCTATGGC AGCTGGAA

FIGURE 2B

1101 GGAGGGCTGAGC CCYGGGGAGC TAGGGA'PAGC 'TCY'GGGGGGT GGGGGGGCTG CAGATCCCCC CTTCTGCCCT  
 CCTCCGACTC GGACCCCTCC ATCCCTATCC AGACGCCCA CCSCCCGAC GTCTAGGGGG GAAAGACGGGG G'GAA'ACTCT 'CCCACTKAC  
 287 GluAlaGlu ProGlyGluL euglylileal aLeuNrgly GlyGlyAlaA 1aAspProPr oPhcysPro HistYRLUJ ysvalserL yAspTyrgly  
 1201 CATCC'TGTGT ATATCGTCCA GGATGGGGCC CCCCAGAGCC CTCACAAACAT CTACTACAG G'PNTGAGGGC TCCCTCTACAG TGGCTATCCT GAA'CCAGCC  
 GTAGGACACA TATAGCACGT CCTAACCGGG GGGGCTCGG GAGGT'GTG'A GAT'GA'GTG'C CATACTCCG AGGAGAGTGC ACGATAGGA CTTAGGTGG  
 320 HisProvalt YrlleValGli oAspGlyPro ProGlnSerP rroProAsnI eTyrrYl's ValOp\* ( SEQ 10 NO : 4 )  
 1301 CTTCT'GGGG TGCTCCCTCA GTTTAATTCC TGGTTGAGG GACACCTCTA ACATC'GGGC CCCCTCTGCC CCCCCACCCC CTCACCTCCT  
 GAAGAACCCC ACCAGGGAGT CAAATTAAGG ACCAAACTC CTGTCGAGA' TGTAGAGCC GGGACACACGG GGGGTGGG GAACTGAGCA CCCGGCTGCT  
 1401 CTCCTCGCTC CCACTTTAG- GATTCTCTAG GATTCCCACT CCCCACCTC CTGCCCTCCC GTT'GGCCAT' CGGTCCCCC CTCTCTCA G'G'CCCTGG  
 CAGGAGCAGA GG'TGAAMTC CTAAGGAATC CTAAGGTGA CGGGG'GAAG GACGGGAGGG CAAACCGGTA CCCACGGGG GAGACAGAGT CACACGACCC  
 1501 ATCCCTTTTC CTGGGGAGG GGCACAGGGT CAGCCCTCCTC TCTGACCATC ACCCAGGGAT CCTTGTCCCC CTCACCCACC CAGAGCTAGG GCGGGGAC  
 TAGGAAAAG GAAACCCCTCC CCGTGTCCGA STCGGGAGGAG AGACTGGTAC TGGTCCGTA GGAAACAGGGG GAGTGGTGG GTCGATCC CGGCCCTGT  
 1601 GCCAACCTT 'GGTTGGCAC CGCCCTCTT' CTGCTCTCA CTGGTTTCTCT CTTCTCTATC TCTTATTCCTT TCCCCTCTCTT CGGTCTCTAG GTCGTCTCTT  
 CGCGGCGRAA ACCAACCGTG GCGGAAGAA GACGGAGAGT GACCCMAAGA GAAAGAGATAG AGATAAAGA AGGGAGAGA GGGAGAGA GGCATCAAG CAGACAGAA  
 1701 CTTCCCTAGC ATCCCTCTCC CCACATCTCC TTTCACCCCTC TTGGCTCTT' ATCC'GTGCC TCTTCCCATCT' CCTGGTGGG GGCATCAAG CATTTCCTCC  
 GNAAGGATCC TAGGAGGG GGTGTAGAGG AAAGTGGAG AACCGAAGAA TAGGACACGG AGAGGGTAGA GGACCCACCC CGTAGTTTC GTAAACAGGG  
 1801 C'T'AGCCCTTC C'GACCTCTC ATACCAACCA CTCACCTCAAG TATGGTGTG' GAGGGAGTC AGACGGTTT TACCCCCGGA ATACCCCTTC CGAGACTGTG AGGTGGGTC  
 GAA'TCGAAAG TCGGGGGAA GACTGGAGAG 'TATGGTGTG' AGGGGAGTC AGACGGTTT TACCCCCGGA ATACCCCTTC CGAGACTGTG AGGTGGGTC  
 1901 CTCAGGCCAT GGGCACCAG GCTCCATTCT C'GGCTGGC CCAGGCCTCT ACATACTAC TCCAGCCATT TGGGGAAAG GCTCTGACAC TCCACCCAG  
 CAGTCGGTA CCGCTCGTCC CGAGCTTAAGA GACCGGACCG GGTCCGGAGA TGTATGATG AGGTGGTA ACCCCAACCA CCCAGTACTG TCGATGGTAC  
 2001 AGAACGAACTG TCCCCTTTG TCCAGCTGGCC ATATGCCAGA TATGCCAGA TGGGAAGTAG CAGAAGGAGT GTCAGCTCTC ATACCTGAAC  
 TCTTCCTCAC NGGCAAAAC AGGTCAACCGG 'TIA'CTCTT ATACTTGGCC AGCCCTGTAC ATACCTGAAC CAGACTRGA CTTRACCGGT GAGCTGGTAC  
 2101 GAACGAAAGT GCTCCAGACAGA AGAGGTGACCC AGAACATGGCC TGGGAAGTAG CAGAAGGAGT GTCAGCTCTC ATACCTGAAC  
 CTTCACTCAA CGAGGCTCTG 'TC'CCACTGG TCCGGGGCTG TCTTACCGG ACCCCTCATC GTCTCGTCA CGAGCAGGAA CTGGAAGTGC CTTCATCCAG  
 2201 GACAGGAAGT AGCACTCTG AAACAGGAAG TGGCTGGCT GGAACTCCAA GTGGCTTGT CTGGGGGATC AGGAGGTGGG AGGTGGATGG TCTCTATCT  
 CTGTCCTCTCA TCGTGAAGAC TTGTCCTTC ACCAGACCA CCTTCAAGGT CACCGAATCA GACCCCTAG 'TC'CCACCC TCCACCT'ACC AACAAATAGA  
 2301 GTGGAGAAGA AGGGGGAA GAACTCCCTT TCAAGGAGAA CCTGGAAACTT ACTGACTCTA AGAGTTAGA GGTGGACCA (SEQ ID NO : 3 )  
 CACCTCTCTT TCCCCCCTCTT CTTGAGGAA AG'CTCTCTT CGACCTTGAA TCACTGACAT TCTCRAATCT CCACCTGGCT

FIGURE 3A

AL-2b.L 1189 TGGTGACTAT CATGCTGTGTATATCGTGCAGGGATGGC JCCCGCCAGA  
AL-2b.L 1233 GCCCTCCAAACATCTACTACACAGATCGATTCTGTCTTGGAGTGGCCATA  
AL-2b.L 1285 TTGGATACGGATACTACAGTGTCTTCATGCATCCAAAGTGCCTGGGTGTCAC  
AL-2b.L 1338 TACATTCTTATTCTCCGTGCAAGTTATTAGGACATCGACTTGCCTGGATGA  
AL-2b.L 1386 CTTCATTTAGCTTACCAACCGTGCACCCATCGCATGCAGGGCTGGAGAGCA  
AL-2b.L 1438 CAGATGGGGAAATTCCGAAATCAGATGGTGTCTGGGGGACAGGGATCCT  
AL-2b.L 1486 GGGTACGGCTCTGTTGTGCTTGTGCTTATCTTCTCTGGAGGCTGA  
AL-2b.L 1538 ATATGGCATCAGACGGACACTGCTCCGGCAACGGGCAAGTGTGGAGGGAA  
AL-2b.L 1588 GCGGGCCAGCATGGTCCCGTGTGATAGGATTGAAAGAGCTACTGAGAAT  
AL-2b.L 1638 GGGGCTCTCAATGAGAGAGC30AGGCTGCTGTTATCATGGAACCGGG  
AL-2b.L 1688 CAGATCAATCATCCCTGGCAGGTCAAGGCAAGGAAAGTTACTTAGCTTCTCT  
AL-2b.L 1738 TCAACCTCTTCCCAAGAAATTATTAGGCTTGTTCAGAAGTGTAGTGT  
AL-2b.L 1788 GTGATCAGATTCGGTGCCTGTCAGCTCTGTGCTACCGCGAGTTGGCT  
AL-2b.L 1838 TCAATGGAAATTGATATCAAGCTTATCGATAACCGTGCACCT (SEQ ID NO: 1)

FIGURE 3B

lerk2	1	MA-RPGQRWLQKWLVAMVVWALCRLATPLAKNLEPVSWSSLNPKFLSQKG
huHTKL	1	MAVRDOSVWKYCWQVLHV--LCRTAISK6IVLEPIYWNSSVSKFLPGQG
AL2.sht	1	MG-PPHSGPGGVRYVGALLLQVLGLVSGL--SLEPVYWN8ANKRFOAEGG
AL2.long	1	MG-PPHSGPGGVRYVGALLLQVLGLVSGL--SLEPVYWN8ANKRFOAEGG
lerk2	52	LVIYPKIGDKLDIICPRA--EAGR--PYEYYK1YLVLRPEQAAACSTVLD
huHTKL	48	LVLYPQIGDKLDIICPKV--DSKTVGQYEYYK1YLVLRPEQAAACSTVLD
AL2.sht	48	YVLYPQIGDRLDLLCPRARPPGPHS6PHN6FYEFYKLYLVGGAQGRRCEAPPA
AL2.long	48	YVLYPQIGDRLDLLCPRARPPGPHS6PHN6FYEFYKLYLVGGAQGRRCEAPPA
lerk2	95	PNVLLVTCMRAPEDEIRPTIKFOEFSPNIMGLEFKKXHHDDYYITST6NGSLEG
huHTKL	95	NTPLLNCAKPDQDIKFTIKFOEFSPHLWGLEFQNKDYYIIST6NGSLEG
AL2.sht	95	PNLLLTCDRPDLDLRLTIKFOEYSPNLWGHFRSHHDYYIIATSDGTREQ
AL2.long	95	PNLLLTCDRPDLDLRLTIKFOEYSPNLWGHFRSHHDYYIIATSDGTREQ
lerk2	245	LENREGGVCRTTRTMKIIHMKVCDPNAVTPEQLTTSRP6KEADNTVKMAD
huHTKL	245	LDNREGGVCOTRANKIILHMKVQDAB--A03TRNKCDPTTRPELEAG
AL2.sht	245	LESLOGGVCLTRGMKVLLRVGQSPRGGAVERPKPVSEMPMERDRAAHSLE
AL2.long	245	LESLOGGVCLTRGMKVLLRVGQSPRGGAVERPKPVSEMPMERDRAAHSLE
lerk2	295	APGSRSQSLGDSDGKHETVNCDEEKSGPCASGG8SGDPDGFFN6KVALCAAV
huHTKL	299	TNGRGSSTTSPPVNPQNSSTDQNSAAGMSG-----NNILGSEVALFAGI
AL2.sht	299	PGKENLPQDQPTSNA7SRGAEGPLPPPSNPAVABAAGGL---ALLLLGVA
AL2.long	299	PGKENLPQDQPTSNA7SRGAEGPLPPPSNPAVABAAGGL---ALLLLGVA
lerk2	249	GAGGIVIFLLEIIFLTVLLLKLRLKRRKHTQ-QRAAALSLSLTLASPKGGSG
huHTKL	233	ASGCIIFIVLVIITLVLVLLLKYRRLRKKHSP-QHTTTLSSLATPKRSGN
AL2.sht	244	GAGGA----MCWRRRRRAKPSSESRRHPGPGSFGRRGGSGLGLGG----GGGNG
AL2.long	244	GAGGA----MCWRRRRRAKPSSESRRHPGPGSFGRRGGSGLGLGG----GGGNG
lerk2	294	TAGTEPSDIIIPLA---TTENNYCPHYEKVSGCYGHPVYIVQENPPQSPA
huHTKL	292	NNQSEPSDIIIPLA---TACSVFCPHYEKVSGCYGHPVYIVQENPPQSPA
AL2.sht	293	PRAEAEPELGIALRGGAADPPFCPHYEKVSGCYGHPVYIVQDGPPQSPPP
AL2.long	295	PRAEAEPELGIALRGGAADPPFCPHYEKVSGCYGHPVYIVQDGPPQSPPP
lerk2	341	NIYY-----
huHTKL	328	NIYY-----
AL2.sht	325	NIYY-----
AL2.long	325	NIYYTSISVLEWPILHTIOLFFWRSKCSRVTTFPLFPYQVITTSCTCRM7SF
lerk2	345	-----KV-----
huHTKL	332	-----KV-----
AL2.sht	335	-----KV-----
AL2.long	345	SFTTLPNSMOACRAQMGFRIRWCPWGDRIQTLTFLVLLILLGRENMM
AL2.long	455	OTLLRDRASVYEAAGQHPL (SEQ ID NO: 2)

(SEQ ID NO: 9)  
(SEQ ID NO: 10)  
(SEQ ID NO: 4)

FIGURE 4

FIGURE 5